

### **DETAILED ACTION**

This Office Action is in response to Applicant's request for reconsideration filed June 30, 2009. Claims 7-17 are pending in the application. Claims 7-17 will presently be examined to the extent they read on the elected subject matter of record.

### **Status of the Claims**

Rejections and/or objections not reiterated from the previous Office Action are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set of rejections and/or objections presently being applied to the instant application.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The rejection of claims 7-17 under 35 U.S.C. 103(a) as being unpatentable over Asrar et al. (US 2003/0060371) **is maintained**.

Claims 7-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asrar et al. (US 2003/0060371).

#### ***Applicant's Invention***

Applicant claims a synergistic mixture of a) a strobilurin compound of formula I



I

and b) a glyphosate derivative II in a synergistically active amount. Applicant also claims a method of increasing the yield in glyphosate-resistant legume using the above referenced mixture.

#### ***Determination of the scope of the content of the prior art (MPEP 2141.01)***

Asrar et al. teach a method of increasing the vigor and/or the yield of an agronomic plant comprising treating the plant or its propagation material with an effective amount of an active agent which has the capability of increasing the yield

and/or vigor of the plant in the absence of pest pressure by fungal plant pathogens, where the active ingredient is selected from the group consisting of a diazole fungicide, a triazole fungicide, and a strobilurin-type fungicide (page 1, paragraph 13) (method of increasing the yield). Asrar et al. teach examples of triazole fungicides that are preferred for use in the invention include epoxiconazole, fluquinconazole, metconazole, and propiconazole (page 5, paragraph 50) (fluquinconazole, metconazole, instant invention). Asrar et al. further teach examples of diazole fungicides that are useful include prochloraz (page 5, paragraph 51). Asrar et al. teach strobilurin-type fungicides that are useful include pyraclostrobin (pyraclostrobin, formula I, claims 1-2 and 4-5, instant invention), azoxystrobin, and picoxystrobin (page 50, paragraph 52)(compounds of formula I).

Asrar et al. teach it is preferred to use the one or more active agents in combination with other materials in a composition (page 16, paragraph 359) (combination of active ingredients, strobilurin and azole fungicide). Asrar et al. teach that compositions of the present invention are comprised of an effective amount of one or more of the active ingredients described above and one or more adjuvants (page 16, paragraph 360). It is known in the art and common practice to combine active ingredients to increase the desired effect such as weed control and yield improvement. Asrar et al. further teach such compositions can also include such other materials as herbicides and pesticides (page 16, paragraph 360). Asrar et al. teach the active agent can be combined with an herbicide for foliar application to the plant. Asrar et al. further disclose the active agents discussed above can be used in this combination (page 16,

paragraph 360). Asrar et al. teach that when an herbicide is used with the active agent, any herbicide used, provided that the plant is to be treated has resistance to such herbicide (page 16, paragraph 361). Asrar et al. teach as described on page 4, paragraph 41, it is preferred that the plant have a transgenic event providing the plant with resistance to the herbicide being used (page, 16, paragraph 361) (glyphosate-resistant, instant invention). Asrar et al. teach on page 17, paragraph 362 and in claim 50, glyphosate is a preferred herbicide (glyphosate derivative II, instant invention). Asrar et al. further teach when the active ingredient is a diazole, triazole or strobilurin-type fungicide, a preferred herbicide is glyphosate (page 17, paragraph 363). Asrar et al. teach that the compositions contain the active agent in an amount from about 1% to about 50 %, by weight, and more preferably, in an amount from about 5% to about 25% (page 17, paragraph 366) (weight ratio, instant invention).

***Ascertainment of the difference between the prior art and the claims  
(MPEP 2141.02)***

Asrar et al. does not expressly teach the combination of pyraclostrobin and a glyphosate compound in a ratio of 5:1 to 0.01:1.

***Finding of prima facie obviousness  
Rationale and Motivation (MPEP 2142-2143)***

It would have been obvious to one of ordinary skill in the art to use the teachings of Asrar et al. to produce a compound that increases the yield in glyphosate-resistant legumes. One of ordinary skill in the art at the time of invention would have been motivated to use the compounds as taught by Asrar et al. because Asrar et al. teach it is

within the skill of one skilled in the art to combine a strobilurin compound, diazole fungicide, and/or a triazole fungicide with a herbicide, most preferably glyphosate, to produce a compound to be used to improve the yield and vigor of an agronomic plant. It is known in the art to combine various herbicidal and fungicidal compounds to improve the efficacy of active ingredients. Given the state of the art as evidenced by the teachings of the cited reference, and absent any evidence to the contrary, there would have been a reasonable expectation of success in combining the teachings of the cited references to formulate an economical composition that would increase the yield of a desired crop, decrease the resistance of an active herbicide, by enhancing its effects, and decrease the amount of the active ingredients that have to be used in formulation.

Therefore, the claimed invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made because every element of the invention has been fairly suggested by the cited references.

### ***Response to Arguments***

Applicant's arguments filed June 30, 2009 have been fully considered but they are not persuasive. Applicant argues that Asrar '371 provides no hint regarding the combined action of a fungicide and an herbicide to increase crop yield. Applicant also argues that Asrar '371 fails to recognize the synergistically and advantageously improved crop yield achieved by the present invention as described on pages 14-15 of the specification and the Brahm Declaration.

In response to applicant's arguments, as noted in the previous Office Actions, Asrar et al. specifically define increasing yield on page 3, paragraph 36. Asrar et al.

define "increasing the yield" is that the yield of a product of the plant is increased by a measurable amount over the yield of the same product of the plant produced under same conditions, but without the application of the subject matter. Thus, it would have been obvious to one of ordinary skill in the art taking Asrar et al. as a whole, that the combination of the herbicide, glyphosate, which eradicates weeds, with a strobilurin type fungicide, pyraclostrobin, which increases crop yield, would increase crop yield, as this is the claim of the invention "method of improving the yield and vigor of an agronomic plant".

In response to applicant's arguments that Asrar et al. fail to recognize the synergistically and advantageously improved crop yield achieved, it would have been obvious to the skilled artisan, looking at the data provided on page 15, that glyphosate used as a baseline provides 100% yield, which is expected as it kills weeds. As such, it would have been obvious to the skilled artisan that if pyraclostrobin, which has an indication to increase yield and vigor in plants, were used in combination with glyphosate, that one would expect to see a further increase in yield. Thus, without a methodology of how the results were derived or other evidence to show that the results would have been expected to one of ordinary skill in the art, it would have been prima facie obvious to the ordinary skilled artisan that these results are expected.

#### ***Response to Declaration***

The declaration under 37 CFR 1.132 filed June 30, 2009, is insufficient to overcome the rejection of claims 7-15 based upon 35 U.S.C. 103(a) as set forth in the Office action because: the data is not commensurate in scope with the claims. The

declaration provides evidence of unexpected results at a weight ratio of pyraclostrobin to glyphosate of 1:6, see page 3 of the Declaration. There is no evidence of unexpectedness at the higher weight ratio range of 5:1 of pyraclostrobin to glyphosate, as cited in claim 8, in the declaration or in the specification on page 15, wherein the ranges are 1:7, 1:3.6, and 1:5.9, respectively. As such, the examiner cannot determine if the combination of pyraclostrobin to glyphosate with a higher weight ratio, i.e. 5:1 would provide the same purported unexpected results. Therefore, Applicant's data submitted in the Declaration is not commensurate in scope with the claims.

Claims 7-15 remain rejected.

***Allowable Subject Matter***

Claims 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant has provided sufficient data to support a method of synergistically increasing the yield in glyphosate resistant legumes by combining pyraclostrobin, a compound of formula I, and a glyphosate, a glyphosate derivative II, at a weight ratio of pyraclostrobin to glyphosate from 1:1 to 0.1:1. The data provided in Applicant's declaration filed June 30, 2009 shows 540 g active liter of glyphosate with a product rate of 1.78 l/ha combined with 250 g active per liter with a product rate of 0.3 l/ha provided an observed efficacy of 25.8% when the expected efficacy was 4.56%. This weight ratio is within the weight ratio of 1:1 to 0.1:1.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andriae M. Holt whose telephone number is (571)272-9328. The examiner can normally be reached on 7:00 am-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richter Johann can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andriae M. Holt  
Patent Examiner  
Art Unit 1616

*/Mina Haghighatian/*  
Primary Examiner, Art Unit 1616